

Remarks

I. INTRODUCTION

The Office Action mailed on October 2, 2007 has been carefully studied and, in view of the following remarks, reconsideration and allowance of this application are most respectfully requested.

Claims 1, 2 and 4-43 are currently pending in this application. The Examiner has previously withdrawn claims 9-12, 14, and 16-43 from consideration. The Examiner has rejected claims 1, 2, and 4-7 and has found that claims 8, 13 and 15 would be allowable if re-written in independent form.

II. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

The Examiner has rejected claims 1, 2, and 4-7 under 35 U.S.C. §112, first paragraph, as allegedly not being enabled by the specification. The Examiner states that “the specification does not reasonably provide enablement for using a -X-Z-Y- substituent with X and Y being heteroatom, heteroatom-containing group, or heterocycle, Z being a divalent radical.” Office Action of October 2, 2007 at page 2. Applicants respectfully disagree with the Examiner’s position and respectfully submit that the claims are fully enabled.

The Examiner states that “[i]n these claims, the numerous variables (e.g. X, Y, Z, J, R’, R”, all known heteroatom, heteroatom-containing group, heterocycle etc.) and their voluminous complex meanings and seemingly endless permutations and combinations are not adequately enabled ” Office Action of October 2, 2007 at page 2. Applicants respectfully disagree and submit that the presently pending claims are not nearly as complex as the examiner suggests. The claims do not refer to “all known heteroatom, heteroatom-containing group, heterocycle etc.,” but rather to specific types of each category. Thus, the claimed variables and their

meaning are far from “voluminous” and “complex.” For example, there is only one selection for the “variable” Z, which is JR'R”. There are only three groups to select from for the variables X and Y. Moreover, “a heteroatom” is limited to S, O, N, and P, and a “heteroatom-containing group” is limited to OR, SR, NR₂ and PR₂, rather than all known heteroatoms and heteroatom-containing groups as suggested by the Examiner. Applicants respectfully submit that the “permutations and combinations” of the variables recited in the present claims are far from “endless.”

The Examiner also states that “[t]he breath of the claims with respect to the X-Z-Y-substituent alone includes all known heteroatom, heteroatom-containing group or heterocycle substituents.” Office Action of October 2, 2007 at page 3. Applicants respectfully disagree with the Examiner's assertion. The definition of X and Y, heteroatom-containing group, and heterocycle were previously amended such that X and Y are each independently selected from a heteroatom selected from S, O, N, and P; a heteroatom-containing group is selected from OR, SR, NR₂ and PR₂; and a heterocycle is a 3-7 membered aromatic or non-aromatic ring containing at least one heteroatom selected from S, O, N, and P.

The Examiner states that “[t]he level of skill and predictability in the art would require, for example, that every known heterocycle be tested in order to determine which heterocycles would have functionality appropriate for coordinating to M.” Office Action of October 2, 2007 at page 4. Applicants respectfully disagree. First, the claims do not refer to all known heterocycles. Second, it would be well within the skill of the ordinarily-skill artisan to select groups within the scope of the claims that are appropriate for coordinating to a metal M. The principles that govern such interactions are well-known and would be readily understood by a person skilled in the art. Indeed, there are textbooks that address these very principles. See, for

example, *Principles and Applications of Organometallic Chemistry*, Collman *et al.*, University Science Books, Mill Valley, CA (1987), Chapters 2-3, pp. 22-234.

The Examiner also states that “[t]here is no reasonable basis for assuming that the myriad of compounds embraced by the claims, including e.g. 3 to 7 membered heterocyclic rings containing at least one heteroatom, will all share the same physiological properties since they are so structurally dissimilar as to be chemically non-equivalent.” Office Action of October 2, 2007 at pages 5-6. Applicants respectfully assert that the object of the present invention relates, not to the physiological properties of the compounds, but rather relates to the physical properties. Specifically, the compounds of the present invention are useful as light-emitting materials in organic light emitting devices. As discussed above, a person skilled in the art would be able to select and prepare the heterocycles within the scope of the claims that are appropriate for coordinating to a metal M. The principles that govern such interactions are well-known and would be readily understood by a person skilled in the art.

Lastly, the Examiner states that “[o]n page 490 of the Concise Encyclopedia Chemistry, the definition of ‘heterocycles’ is cyclic hydrocarbon compounds in which the ring consists of carbon and at least one other element, usually, N, O or S. The definition goes on to explain that the possibilities for synthesis are nearly unlimited.” Office Action of October 2, 2007 at page 6. Applicants respectfully submit that the recited passage does not indicate that the presently claimed invention is non-enabled. Rather the passage would indicate the opposite – that the claims are enabled. The passage does not seem to indicate that what is *unknown* about the preparation of heterocycles is “nearly unlimited,” but rather indicates that what is *known* about the preparation of heterocycles is “nearly unlimited.” Applicants respectfully submit that a person skilled in the art would be able to make and use the compounds as presently claimed.

Applicants respectfully submit that the claims fully comply with the requirements of 35 U.S.C. §112.

III. CONCLUSION

Applicants respectfully submit that the pending claims are in condition for allowance and requests that such action be taken. If for any reason the Examiner believes that prosecution of this application would be advanced by contact with the Applicant's attorney, the Examiner is invited to contact the undersigned at the telephone number below.

Respectfully submitted,
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Dated: January 2, 2008

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